Pacific Islands Assistantship
American Samoa
Project Plan for Laurie Williams
Updated April 12, 2004

Introduction

The Pacific Island Technical Assistantship is an inter-agency collaboration designed to address coastal zone management issues using geo-spatial technologies. This program, which is federally funded through the NOAA's Pacific Services Center in Honolulu, provides the American Samoa Coastal Management Program (ASCMP) with a GIS professional, hardware, software, training, and related support. The ultimate goal is to establish an accurate, structured, and accessible GIS and personnel trained in geo-spatial technologies to implement spatial analyses of coastal resource management issues within the Territory of American Samoa.

ASCMP is housed in the American Samoa Department of Commerce and works with other local and federal agencies to accomplish its coastal and ocean resource management goals. ASCMP's program areas are based on priorities set through the Coastal Zone Act; priority issues include cumulative and secondary impacts, wetland habitat preservation, ocean resource management, coral reef protection, non-point source pollution, land management, population growth, and public awareness. ASCMP has commitment from staff and leadership to develop a comprehensive GIS, provided that the program receives assistance acquiring base data, training, and identifying appropriate technologies. The work completed by the Technical Assistant will directly relate to the implementation of a GIS to aid in priority issue areas. The Assistant will support ASCMP in using GIS in innovative ways that help integrate coastal resource management with the traditions and customs that exist within the island's unique culture.

The Pacific Island Technical Assistantship is now in its second cycle. During the first cycle, the Assistantship in American Samoa focused on basic data development, creating and organizing data structures and mechanisms for data sharing, and network administration. The focus in this second cycle is on three major areas: building local capacity in geo-spatial technologies, additional geo-spatial data development and analysis, and increasing public awareness of geo-spatial technologies. These areas are discussed in depth in the following sections.

List of Projects
1. Building Local Capacity in Geo-spatial Technologies
2. Geo-spatial Data Development and Analysis
3. Public Awareness and Education of Geo-spatial Technologies

Project Descriptions

Project 1 - Building Local Capacity in Geo-spatial Technologies
American Samoa imports much of its professional and technical expertise in the form of short-term contract workers from the mainland. These workers provide necessary services, but when their contracts are up, they leave the island. Building local capacity in geo-spatial technologies

has been identified as a major need by ASCMP, in order to maintain a consistent, professional level of GIS expertise on-island.

In 2001, The American Samoa GIS User Group was formed on-island. Since the summer of 2003, the group has suffered from many members (non-Samoans) leaving for the States. As of early 2004, new GIS personnel are being hired; however, once again these are mainly contract workers from off-island. The good news is that ASGIS User Group participation by additional governmental agencies is increasing. We will continue to build capacity in technical skills on island to encourage Samoans to move into leadership roles in the User Group.

Within ASCMP, several staff members have been identified as having skills or abilities that would enable them to quickly learn various computer and GIS technologies. The identification of additional staff for training in geo-spatial technologies is an on-going process.

Project 1	<Building Local GIS Capacity in Geo-spatial Technologies>
Activity	• Identify and train ASCMP/DOC staff in geo-spatial technologies • Provide technical assistance and knowledge to other local agencies and individuals • Make newly created GIS data available to the ASGIS User Group and others • Give GIS-related guest lectures at AS Community College • Participate in ASGIS User Group and encourage Samoans to participate • Identify and train ASCMP/DOC staff in basic network and system administration technologies
Deliverable(s)	Trainings in GIS and GPS technologies to ASCMP/DOC staff, regularly scheduled ASGIS User Group meetings, meeting minutes, project reports and summaries
Date	Ongoing

Project Summary

On January 29, 2004, I made a short presentation about my proposed project at the American Samoa Land Grant Seminar Series. This seminar series is a monthly event that brings together diverse researchers on the island. The seminar was well attended and there were several good questions about possible uses for GIS, GPS, and remote sensing on the island. The Community Forestry Program Coordinator at Land Grant, Mike Misa, asked for instruction in GIS. In mid-April, I am scheduled to do a "What is GIS" talk at the American Samoa Strategic Forest Planning Meeting organized AS Land Grant. The diverse audience will include researchers, village representatives, and local and federal government agency representatives. Many will be exposed to GIS for the first time.

I attend the monthly ASGIS User Group meetings.

Project 2 – Geo-spatial Data Development and Analysis
The previous NOAA PITA, along with the ASCMP GIS Planner, made good progress in creating and organizing data structures and creating base map data for American Samoa. One focus in this area will be to complete base map data and to begin analyses of the data for coastal management issues. Another focus will be integrating GIS into current office practices, especially related to the land use permitting system. Work will continue on standardizing GIS use in the Territory by promoting the adoption of the Spatial Data Infrastructure by executive order.

Project 2	<Geo-spatial Data Development and Analysis>
Activity	- Create methodology for Tafuna Plain land use change analysis (April 04) - Analyze Tafuna Plain land use change 1988-2004 using aerial photos and Quickbird imagery (July 04) - Update coastlines using Quickbird imagery (June 04) - Maintain linkage between the land use permitting system and GIS (Dec 04) - Write VB script to automate datum/projection transformations from Avenue and ArcToolbox (Dec 04) - Create a customized user interface for CRO GIS input (Dec 04) - Develop system to identify parcels and track land use (Dec 04) - Add capability to identify database updaters (Dec 05) - Create FGDC-compliant metadata for 150+ GIS files (Dec 05) - Promote Executive Order for Spatial Data Infrastructure document (2004) - Assist with completing updated roads layer (May 04) - Assist with completing buildings layer (May 04) - Assist in scanning and geo-referencing historic aerial images (Dec 05) - Validate Manu'a coastline layer (Sept 04) - Create additional basemap layers (Dec 05) - public health - hazards - complete wetlands delineation - streams attributing
Deliverable(s)	Written documents, maps, data layers, scripts
Date	As noted above

Project Summary

Approximately two days per week are spent on collecting, editing, and merging GPS data for the roads coverage of Tutuila. Hopefully, this work will wrap up in May. I scanned aerial photos from 1984 and have georeferenced a few of them for an upcoming analysis of land use change on the Tafuna Plain over the past 20 years. Aerial photos from other years have been located and/or borrowed for scanning.

We are awaiting the Quickbird mosaic for American Samoa, and anticipate receiving the imagery in June 2004. This imagery will be used for several projects in this category.

Project 3 – Public Awareness and Education of Geo-spatial Technologies

Public awareness is an important part of the Assistantship, not only as a means toward building capacity in geo-spatial technologies, but also to demonstrate the good work that ASCMP/DOC
GIS personnel provide to American Samoa.

Project 3	<Public Awareness & Education of Geo-spatial Technologies>
Activity	- Create and implement plans for public events to promote awareness of GIS Reef Weeks – March 2004 and 2005 Ocean Fest – April 2004 and 2005 Wetlands Month – May 2004 and 2005 Camp Tifitifi – June/July 2004 and 2005 Coastweeks – September 2004 and 2005 GIS Day – November 2004 and 2005 - Create and implement education outreach plans to church youth groups - Create and implement education outreach plans to schools
Deliverable(s)	GIS presentations geared toward the various audiences
Date	As noted above

Project Summary

I presented a PowerPoint slideshow about GIS and coral reefs to one 4th grade class (approximately 26 students) during Reef Weeks, a program of Fagatele Bay National Marine Sanctuary. The GIS-related activity was scrapped due to time constraints. At the second school, there was no time for either the GIS presentation or the activity. I did not participate at in presentations to two additional schools. It is unclear whether Reef Weeks is an appropriate means of GIS education by DOC – is 4th grade too early to talk about GIS, do the children understand computer mapping, GIS received very little time, etc.

Tali Tunei and I are gathering age-appropriate materials for upcoming events with school children, as well as for GIS Day which will include activities for all ages. For 2004, GIS Day was moved to coincide with International GIS Day on November 17 (in 2003, the event was held in March). We also hope to hold other school activities for Geography Awareness Week.

Professional Development Allowance

I will travel to Charleston, SC for the NOAA Coastal Services Center trainings in mid-May. I submitted a paper abstract for the Coastal Zone Asia Pacific conference in Brisbane, Australia in September 2004. I anticipate presenting a land use change analysis of the Tafuna Plain from 1984-2004. I am preparing a poster abstract for the ESRI conference in August (likely on the same project).

Travel Events and Cost:

Event (including location)	Dates	Estimated Cost
CSC Technical Training (Charleston, SC)	May 10-14, 2004	$2500
All Islands Management Mtg (Saipan, CNMI)	June 21-23, 2004	$2000
ESRI User Conference (San Diego)	August 9-13, 2004	$1200
CZAP (Brisbane, Australia)	Sept 5-9, 2004	TBD
GeoTools '05 (Myrtle Beach, SC)	March 2005	$2500
All Islands Management Meeting - TBD	Summer 2005	TBD
GIS Conference Univ. of South Pacific, Fiji ??	November 2005 ??	TBD

Additional Costs:

None at this time. I am looking into purchasing a couple of GIS/Coastal Zone Management books and possibly a Visual Basic programming book.

Approval

_____

Laurie L. Williams

Pacific Island Assistant

_____

Gene Brighouse

Island Manager(s)

_____

Darcee Killpack

PSC Assistantship Coordinator